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| Name: | Date: |
| Course/Subject: Keystone Algebra I | Team: |
| Topic: Coordinate Geometry | School District: Blue Mountain |

Key Learning: Coordinate geometry and how it can be applied to real-world applications.

Unit Essential Question: How does coordinate geometry apply to real-world applications?

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| Concept: Cartesian coordinate plane | Concept: Calculate slope | Concept: Writing a linear equation form |
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| Lesson Essential Questions:   * How do you plot points on the Cartesian coordinate plane? * What are the coordinates associated with a given point? * Explain how the game Battleship relates to graphing on the coordinate plane. (ET) | Lesson Essential Questions:   * How do you calculate slope using two points? * How do you find slope by using rise and run of a line? * How do you determine if a line is increasing or decreasing by the slope? (ET) | Lesson Essential Questions:   * How do you use two points? * How do you use point-slope formula? * How do you interpret a graph? * How do you put an equation into standard form? * What is the usefulness in writing an equation in slope intercept form? (ET) |
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| Vocabulary:   * X-axis * Y-axis * Origin * Quadrants * Coordinates | Vocabulary:   * Slope * Rate of change * (y₂ - y₁) / (x₂ - x₁) | Vocabulary:   * Point-slope formula * Y-intercept * Slope-intercept formula * Standard form |
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| Additional Information/Resources: Calculators  PA Standards: 2.6, 2.9, 2.11 | | |

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| Concept: Scatter plots and line of best fit | Concept: | Concept: | Concept: | Concept: |
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| Lesson Essential Questions:   * How do you construct a scatter plot? * How do you interpret a scatter plot? * How do you find a line of best fit? * How do you interpret a line of best fit? * How can trend lines and lines of best fit be used to make predictions? Why is this useful? (ET) | Lesson Essential Questions: | Lesson Essential Questions: | Lesson Essential Questions: | Lesson Essential Questions: |
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| Vocabulary:   * Scatter plot * Line of best fit * Correlation | Vocabulary: | Vocabulary: | Vocabulary: | Vocabulary: |